

November 30, 2011

Ms. Tonya Duran  
Sr. Workers Compensation Claims Adjuster  
State Compensation Insurance Fund  
P.O. Box 659011  
2450 Venture Oaks Way, Suite 500  
Sacramento, CA 95833-3291

Re: Final Report of Air Monitoring for Volatile Organic Compounds (VOC's) at Board of Equalization Building Located at 450 N Street, Sacramento, CA

Dear Ms. Duran:

This report presents results of the air sampling for volatile organic compounds (VOC's) by Entek Consulting Group, Inc. (Entek) in the Board of Equalization (BOE) building located at 450 N Street in Sacramento, CA. You requested our services to evaluate VOC levels inside of the building as a follow-up to previous testing by Mr. C.E. Schmidt whose results were presented in a report in May 2011 to La Croix Davis, LLC. In Mr. Schmidt's investigation benzene, carbon disulfide, acetone, and 2-butanone were detected in locations where floor tiles were removed with exposed adhesive. Some of the testing conducted in Schmidt's investigation included flux chamber tests, in addition to ambient air sampling in the same rooms where flux chamber testing was conducted.

#### **Entek Investigation Parameters**

As a result of the testing conducted by Schmidt with measurable levels of benzene and carbon disulfide, Entek was requested to conduct air sampling in selected locations with benzene and carbon disulfide as the primary target compounds or "targets of concern" (TOC). The sampling in this investigation was conducted in locations where floor finishes were intact and did not include flux chamber testing or in areas where floor adhesives were exposed. Entek was asked to collect air samples in the following interior locations:

1. Mail Room on 19<sup>th</sup> Floor
2. Mail Room on 21<sup>st</sup> Floor
3. Mail Room on 22<sup>nd</sup> Floor
4. Cubicle #15 on 21<sup>st</sup> Floor
5. Cubicle #143 on 7<sup>th</sup> Floor

In addition to the above interior sample locations, two air samples were collected outside of the building to assess the ambient air concentrations of the same VOC's for comparison to the air samples collected inside of the building. The outside ambient air sample locations included the balcony of Room 2304, and the south side of the building near the parking garage about six feet above ground level. Air sampling was conducted on November 1, 2011 between 4:00 pm and 7:17 pm. Air sampling was conducted while the heating, ventilating, and air-conditioning (HVAC) system was operating and included the period when staff were also leaving work for the day.

The sampling protocol included an evaluation for VOC's following the modified EPA Compendium Method TO-15, which collected the air samples into evacuated six-liter SUMMA canisters with analysis by gas chromatography and mass spectroscopy (gc/ms). In addition to the 62 VOC's analyzed by this method, the Top Ten Tentatively Identified Compounds (TIC's) were also evaluated. The evacuated SUMMA canisters inside of the building were placed on either table tops, shelves, or desk tops located approximately 3-5 feet above the floor level. The air sample collected on the balcony of Room 2304 was with the SUMMA canister placed on the balcony itself, while the canister at the outside parking garage location was literally chained about six feet above ground level for security.

The attached chain of custody form identifies all sample locations, start and end sampling times, and the initial and final vacuum pressures during the 2+ hour sample periods. All air samples were submitted and analyzed by Air Toxics LTD of Folsom, CA.

### Executive Summary

Volatile organic compounds (VOC's) were evaluated and very low levels were detected inside of five interior locations at the BOE building. The detectable VOC's included ethanol (8.7 - 22 ug/m<sup>3</sup>), methylene chloride (3.0 - 3.4 ug/m<sup>3</sup>), 2-Propanol (8.7 ug/m<sup>3</sup>), and 1,1-difluoroethane [5.6 parts per billion by volume (ppbv)].

The target compounds benzene and carbon disulfide were not detected in the five interior locations, nor were they detected in the two outside ambient air samples. The reportable limits for benzene ranged between 2.6 and 2.8 ug/m<sup>3</sup>, while the reportable limits for carbon disulfide ranged between 10 and 11 ug/m<sup>3</sup>.

The table below provides a summary of the specific VOC detected in each sample location.

**Table of Sampling Results**  
**Volatile Organic Compounds (VOC's)**

Location	Specific VOC Detected and Concentration (ug/m <sup>3</sup> )
Mail Room 19 <sup>th</sup> Floor	Ethanol – 8.7
Mail Room 21 <sup>st</sup> Floor	Ethanol – 10 Methylene Chloride – 3.0 * 1,1-difluoroethane – 5.6 ppbv **
Mail Room 22 <sup>nd</sup> Floor	Ethanol – 10 2-Propanol – 8.7
Cubicle #15 on 21 <sup>st</sup> Floor	Ethanol – 22
Cubicle #143 on 7 <sup>th</sup> Floor	Ethanol – 11 Methylene Chloride – 3.4
Outside Ambient Air at Balcony of Room 2304	None Detected
Outside Ambient Air at Parking Garage South Side	None Detected

\* Estimated Value

\*\* Estimated Value based on presumptive evidence

The results of this investigation did not find levels of benzene or carbon disulfide above the detectable levels using the EPA Compendium Method T0-15, similar to the method used in the investigation by Mr. Schmidt. It was also noted that the floors inside of the three mail rooms were covered with floor tiles. It is my understanding, the floor tiles in Mail Room 19 apparently are the older floor tiles, while the floor tiles in Mail Rooms 21 and 22 were removed and replaced prior to our investigation.

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It has been our pleasure working with you on this investigation. Forward a copy of this report to all interested parties. Please call me at (916) 632-6800 if you have any questions regarding this report.

Sincerely,

Richard Beall, CIH, CSP  
President

Enclosures